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Processed Food Diet Raises Lung Cancer Risk

Analysis by Dr. Joseph Mercola | September 13, 2025

STORY AT-A-GLANCE

- People who ate the most ultraprocessed foods had a 41% higher risk of developing lung cancer compared with those who ate the least
- The increased risk was seen in both smokers and nonsmokers, showing that diet alone influences lung cancer development
- Processed foods alter nutrient absorption, strip away protective compounds, and add toxic byproducts that fuel inflammation and immune dysfunction
- Harmful chemicals from packaging and high-heat cooking further raise cancer risk and weaken your body's defenses
- Choosing whole, unprocessed foods and cutting linoleic acid in vegetable oils down to 2 grams or less daily is one of the most effective ways to protect your lungs

Lung cancer strikes more than 2.4 million people worldwide every year, according to the World Health Organization, making it one of the most common and deadliest forms of cancer.[1] This disease is characterized by the uncontrolled growth of abnormal cells in the lungs, leading to symptoms such as persistent cough, chest pain, shortness of breath, coughing up blood, and unexplained weight loss.

Left untreated, lung cancer spreads rapidly to other parts of the body, and survival rates are grim, especially for advanced cases. Smoking is widely known as the leading cause, yet a growing number of diagnoses occur in people who have never smoked a day in their lives. That fact alone demands another explanation.

A new study published in Thorax uncovered that the way you eat, specifically the amount of ultraprocessed food in your diet, is tied to a dramatically higher risk of developing lung cancer.[2]

Ultraprocessed foods are not just "convenience foods." They're industrial products like sodas, chips, packaged soups, chicken nuggets, and diet soft drinks — engineered with additives, preservatives, flavor enhancers, and unhealthy fats your body wasn't meant to process. These ingredients do more than expand shelf life; they alter how nutrients are absorbed, generate toxic byproducts during processing, and introduce harmful chemicals from packaging into your system.

That combination sets the stage for inflammation, immune dysfunction, and ultimately, cancer. Understanding this link between food and lung cancer risk changes the conversation. It's not only about smoking anymore — it's about what you put on your plate. To see how this risk unfolds in the data, let's look at what the researchers discovered in their analysis.

Processed Foods Drive a Measurable Increase in Lung Cancer Risk

The Thorax study explored whether eating **ultraprocessed foods** influences the risk of developing lung cancer.[3] Researchers analyzed dietary data from more than 100,000 adults, following them for over 12 years. Their goal was straightforward: determine if a higher intake of ultraprocessed foods was tied to a greater chance of lung cancer, including both non-small cell lung cancer (NSCLC) and small cell lung cancer (SCLC).

- **Lung cancer risk jumped 41% in high processed food eaters —** Participants in the study were middle-aged and older adults, averaging 62.5 years old at the start. Over more than 12 years of follow-up, 1,706 lung cancer cases were confirmed.

  Those in the highest quarter of ultraprocessed food intake faced a significantly higher risk of developing lung cancer compared with those in the lowest quarter. In simple terms, eating the most processed foods meant a much greater likelihood of

being diagnosed with lung cancer, regardless of type.

- **Health risks remained even after adjustments —** Importantly, the elevated risk did not disappear after researchers adjusted for smoking, diet quality, age, sex, and other variables. This suggests the link between processed food consumption and lung cancer is not simply explained by lifestyle differences or smoking habits.

- **Processed foods change nutrient absorption —** According to the study, industrial processing alters the natural food matrix — essentially, the way nutrients are packaged and delivered in whole foods.[4] This disruption affects how your body absorbs nutrients and may reduce protective compounds normally present in unprocessed foods.

- **Harmful contaminants are introduced —** Beyond losing natural nutrient benefits, ultraprocessed foods expose you to harmful byproducts formed during manufacturing and cooking. One example highlighted is acrolein, a toxic chemical also found in cigarette and vape smoke, plastics, and gasoline. Acrolein forms when fats and oils are cooked at high temperatures, which means the danger isn't only in smoking but also in what's on your plate.

- **Packaging chemicals are another factor —** Researchers noted that chemicals leaching from food packaging also contribute to cancer risk. Many ultraprocessed foods come in plastic, lined containers, or wrappers that release compounds that interfere with your hormones and immune defenses.

Ultraprocessed Foods Raise Cancer Risk Through Multiple Pathways of Harm

The research emphasized that more than one factor is likely responsible for the higher cancer risk in those who consume the most ultraprocessed foods. It's not just additives or just packaging chemicals — it's the combined effect of nutrient loss, toxin exposure, and microbiome disruption that makes processed foods so damaging to your long-term health.

- **Never-smokers are not exempt —** Surprisingly, the association between processed food and lung cancer was stronger among people who had never smoked. That detail matters to you because it shows the danger is not just relevant to **smokers**. Even if you've avoided cigarettes, a diet high in ultraprocessed foods raises your risk.

- **Inflammation is a key mechanism —** Outside experts suggest that the cancer risk is driven by **inflammation**.[5] Chronic inflammation occurs when your immune system stays switched on due to constant irritants, such as chemical additives and poor nutrient quality. Over time, inflammation damages tissues, weakens immune surveillance, and gives mutated cells an opportunity to grow unchecked.

- **Immune disruption further fuels risk —** Another mechanism involves your **gut microbiome**, which is the community of microbes in your digestive tract. Ultraprocessed foods are low in protective compounds and high in additives that harm these microbes. Damage to your microbiome reduces immune strength, leaving your body less equipped to detect and destroy abnormal cells before they turn into tumors.

- **Practical takeaway from the study —** If your goal is to avoid lung cancer, one of the most impactful actions you can take is to shift away from ultraprocessed foods and toward whole, unprocessed ingredients. This is not about perfection, but about stacking the odds in your favor by choosing real food over industrial products.

How to Protect Yourself from Processed Food Damage

The connection between ultraprocessed foods and lung cancer is strong, but the good news is that you have direct control over what goes into your body. This is about removing the root cause — the unhealthy fats, additives, and chemicals that drive inflammation and weaken your defenses — and replacing them with foods that give your cells energy and resilience. Consistent healthy choices shift the balance in your favor.

1. **Eliminate hidden vegetable oils from your diet —** If you want to do one thing that makes the biggest difference, it's lowering your intake of **linoleic acid** (LA). LA is a polyunsaturated fat found in nearly every ultraprocessed food and most restaurant meals. Once it gets into your tissues, it lingers for years, creating inflammation, insulin resistance, and mitochondrial stress.

   Track your intake using an app like Food Buddy in my Health Coach, which is coming out this year. Aim for under 5 grams daily, but closer to 2 grams is even better. Replace vegetable oils like canola, soybean, and sunflower with traditional saturated fats such as grass fed butter, ghee, or tallow. Even **olive oil** and avocado oil should be used sparingly.

2. **Fill your cart with foods that don't need labels —** Real food doesn't need a long ingredient list. You'll find it in the perimeter of the store — fruits, vegetables, grass fed meats, **pastured eggs**, and dairy. These foods fuel your metabolism without flooding your body with toxic oils or additives.

   If you do pick up something in a package, look carefully for red-flag ingredients such as "vegetable oil," "soy lecithin," "natural flavors," or "maltodextrin." Those are signals the product is ultraprocessed no matter how "healthy" the marketing looks.

3. **Rethink what you drink —** One of the fastest ways to wreck your metabolism is through your glass. Sodas, energy drinks, and most plant-based milks are loaded with **high-fructose corn syrup**, emulsifiers, **phosphates** and artificial sweeteners that spike your blood sugar or disrupt insulin signaling. Even diet drinks damage your gut and metabolism.

   Stick with filtered water, herbal teas, or sparkling water with a splash of fresh juice. This way your pancreas isn't hit with a constant stream of chemical stressors.

4. **Avoid fake "plant-based" convenience foods —** Just because something is labeled "plant-based" doesn't make it healthy. **Meatless burgers**, vegan nuggets, and similar products are among the most processed items on the shelf. They often contain

dozens of synthetic additives, gums, and flavor enhancers, along with vegetable oils loaded with LA. Instead of trusting the label, go for whole plants like apples, squash, or lentils. If it's made in a lab, your body doesn't need it.

5. **Track your eating habits to spot weak points —** Most people are shocked when they actually see how much ultraprocessed food slips into their daily routine. Write down or log everything you eat for five days. Look for hidden sources — frozen entrees, protein bars, salad dressings, or even "healthy" snacks.

   Once you spot the patterns, it becomes easier to swap them out for foods that truly nourish you. This isn't just about awareness; it's about giving you direct feedback so you can connect your choices with how you feel, think, and function.

FAQs About Ultraprocessed Foods and Lung Cancer

Q: How do ultraprocessed foods increase lung cancer risk?

A: Ultraprocessed foods increase risk by disrupting how nutrients are absorbed, stripping out protective compounds, and adding harmful chemicals during cooking and packaging. These changes create inflammation, weaken your immune defenses, and damage your microbiome, which together give abnormal cells an opportunity to grow into cancer.

Q: Is the risk only a concern for smokers?

A: No. The Thorax study found the link between ultraprocessed foods and lung cancer was even stronger in people who had never smoked.[6] This shows diet alone is enough to raise your cancer risk, regardless of smoking history.

Q: What specific numbers did the study report?

A: Researchers tracked over 100,000 adults for more than 12 years and confirmed 1,706 lung cancer cases. People who ate the most ultraprocessed foods had a 41% higher risk of developing lung cancer compared with those who ate the least, and this included both non-small cell and small cell lung cancers.

Q: Which foods are considered ultraprocessed?

A: Examples include sodas, packaged soups, chips, chicken nuggets, plant-based meat substitutes, and soft drinks. These products are engineered with additives, emulsifiers, flavor enhancers, and vegetable oils that your body was not designed to handle.

Q: What steps can I take to lower my risk?

A: You can protect yourself by cutting LA from vegetable oils down to under 2 grams daily, choosing whole foods that don't need labels, avoiding plant-based junk food, rethinking sweetened or diet drinks, and tracking your eating habits to uncover hidden processed foods. These small but consistent changes stack the odds in your favor and protect your long-term health.

Sources and References

- [1] World Health Organization, International Agency for Research on Cancer, Global Cancer Observatory, Lung
- [2, 3, 6] Thorax July 29, 2025
- [4, 5] CNN July 29, 2025